State of Utah

Department of
Environmental Quality

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Executive Director

DIVISION OF AIR QUALITY
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Director

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Lieutenant Governor

10303

Title V Operating Permit

PERMIT NUMBER: 2300015002
DATE OF PERMIT: December 1, 2006
Date of Last Revision: October 1, 2007

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

Ash Grove Cement Company
PO Box 51
Nephi, UT 84648

Permitted Location:

Leamington Cement Plant
Hwy 132
Leamington, UT 84638

UTM coordinates: 397,300 m Easting, 4,379,850 m Northing
SIC code: 3241 (Cement, Hydraulic)

UTAH AIR QUALITY BOARD

By:

M. Cheryl Heying, Executive Secretary

Prepared By:

Brandy Cannon

ENFORCEABLE DATES AND TIMELINES

The following dates or timeframes are referenced in Section I: General Provisions of this permit.

Annual Certification Due:	January 30 of every calendar year that this permit is in force.
Renewal application due:	June 1, 2011
Permit expiration date:	December 1, 2011
Definition of "prompt":	written notification within 14 days.

ABSTRACT

Ash Grove Cement Company operates the Leamington cement manufacturing plant in Juab County, Utah. This plant has been in operation since 1981. At the Leamington cement plant, cement is produced when inorganic raw materials, primarily limestone (quarried on site), are correctly proportioned, ground and mixed, and then fed into a rotating kiln. The kiln alters the materials and recombines them into small stones called cement clinker. The clinker is cooled and ground with gypsum and additional limestone into a fine powdered cement. The final product is stored on site for later shipping. The major sources of air emissions are from the combustion of fuels for the kiln operation, from the kiln, and from the clinker cooling process. The Leamington cement plant is a major source for emissions of PM_{10}, NO_x, and CO, and is subject to NSPS Subparts A, Y, & OOO, and NESHAP Subparts A & LLL.

OPERATING PERMIT HISTORY

Permit/Activity	Date Issued	Recorded Changes
Title V administrative amendment - enhanced AO (Project #OPP0103030009)	10/1/2007	Changes: Incorporate DAQE-AN0103030015-07, July 23, 2007, for replacement of three baghouses (419.BF3,4,5) with one larger baghouse (514.BF3) and correction to some of the equipment unit numbers and descriptions.
Title V renewal application (Project #OPP0103030004)	12/1/2006	Changes: Action initiated by a renewal of an operating permit.
Title V administrative amendment by DAQ (Project #OPP0103030005)	7/29/2005	Changes: Incorporate changes approved in DAQE-AN0303011-05, dated May 20, 2005, including the following: installation of a limestone bypass system to incorporate additional limestone into the clinker and gypsum prior to the finish mill, addition of two new baghouses associated with the limestone bypass system located at the new limestone silo and conveyor, and replacement of two baghouses (419.BF4, 419.BF5) controlling discharge from the east and west clinker belts into the clinker storage silos. Additional permit changes include: correction of typographical errors, update of emission unit identification numbers, and revision of the SSMP and O&M plan conditions to more closely reflect MACT language.
Title V administrative amendment by source (Project #OPP0103030002)	12/24/2003	Changes: Add the cross-belt analyzer approved in DAQE-AN0303009-03 and incorporate limit changes from DAQE-AN0303006-03. In addition, a number of small changes or corrections were made. These result from minor changes in previously listed equipment and to correct typographical errors.
Title V initial application (Project #OPP0103030001)	1/5/2000	Changes: Action initiated by an initial operating permit application.

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Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

SECTION I: GENERAL PROVISIONS

I.A **Federal Enforcement.**

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

I.B **Permitted Activity(ies).**

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

I.C **Duty to Comply.**

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Executive Secretary, within a reasonable time, any information that the Executive Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Executive Secretary copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

I.D **Permit Expiration and Renewal.**

I.D.1 This permit is issued for a fixed term of five years and expires on the date shown under "Enforceable Dates and Timelines" at the front of this permit. (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due on or before the date shown under "Enforceable Dates and Timelines" at the front of this permit. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E **Application Shield.**

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Executive Secretary takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Executive Secretary any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F **Severability.**

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G **Permit Fee.**

I.G.1 The permittee shall pay an annual emission fee to the Executive Secretary consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H **No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I **Revision Exception.**

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

I.J **Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Executive Secretary or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K **Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L **Compliance Certification.**

I.L.1 Permittee shall submit to the Executive Secretary an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than the date shown under "Enforceable Dates and Timelines" at the front of this permit, and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

I.L.1.d Such other facts as the Executive Secretary may require to determine the compliance status.

I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Executive Secretary: (R307-415-6c(5)(d))

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
1595 Wynkoop Street
Denver, CO 80202-1129

I.M **Permit Shield.**

I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:

I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))

I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))

I.M.2 Nothing in this permit shall alter or affect any of the following:

I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))

I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b)

I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))

I.M.2.d The ability of the Executive Secretary to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

I.N **Emergency Provision.**

I.N.1 An "emergency" is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))

I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency.

(R307-415-6g(3)(a))

I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))

I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))

I.N.2.d The permittee submitted notice of the emergency to the Executive Secretary within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))

I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))

I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

I.O **Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

I.P **Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

I.Q **Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii))

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

I.S.1.b.4 The analytical techniques or methods used.

I.S.1.b.5 The results of such analyses.

I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.

I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2 Reports.

I.S.2.a Monitoring reports shall be submitted to the Executive Secretary every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))

I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i)

I.S.2.c The Executive Secretary shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. Prompt, as used in this condition, shall be defined as written notification within the number of days shown under "Enforceable Dates and Timelines" at the front of this permit. Deviations from permit requirements due to unavoidable breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Executive Secretary are to be sent to the following address or to such other address as may be required by the Executive Secretary:

Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000

All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Executive Secretary:

For annual compliance certifications:

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
1595 Wynkoop Street
Denver, CO 80202-1129

For reports, notifications, or other correspondence related to permit modifications, applications, etc.:

Environmental Protection Agency, Region VIII
Office of Partnerships & Regulatory Assistance Air & Radiation Program
(mail code 8P-AR)
1595 Wynkoop Street
Denver, CO 80202-1129
Phone: 303-312-6440

I.T **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Executive Secretary or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Executive Secretary determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the Acid Rain Program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into this permit. (R307-415-7g(1)(b))

I.T.3 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U **Inventory Requirements.**

An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.V **Title IV and Other, More Stringent Requirements**

Where an applicable requirement is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, Acid Deposition Control, both provisions shall be incorporated into this permit. (R307-415-6a(1)(b))

SECTION II: SPECIAL PROVISIONS

II.A **Emission Unit(s) Permitted to Discharge Air Contaminants.**
(R307-415-4(3)(a) and R307-415-4(4))

II.A.1 **Permitted Source**
Source-wide

II.A.2 **Quarry: Quarry Operations**
Rock drilling operations, truck hauling, and storage piles.

II.A.3 **211.BF1: Stationary Crusher**
Stationary crusher with an approximate production rate of 1,000 tons per hour, for reduction of quarried material to 3 inch minus sized material. The crusher is equipped with a baghouse and with water sprays on the feed hopper. (pre-1983)

II.A.4 **211.BF2: Raw Material Transfer**
Crushed material is transported to raw material storage by belt B8. The raw material transfers at the end of conveyor B8 prior to loading into raw material reclaim area. The conveyor transfer point is equipped with a baghouse & water sprays. (pre-1983)

II.A.5 **315.SX1 thru 4: Raw Material Silos**
Raw materials such as limestone, silica, iron, and shale are stored in one of four silos. The four silos are equipped with one common baghouse.

II.A.6 **315.BF2: Fifth Component Silo**
Raw materials are stored in a silo. This silo is equipped with a baghouse.

II.A.7 **317.BF1: Kiln & Pre-Calciner and Raw Mill**
Kiln burning process, calciner, and preheater tower off gases are directed through the bottom of the raw mill where finely ground raw material is picked up. Combustion gases and fine raw materials are then vented to a baghouse.

II.A.8 **412.BF1 and 2: Blending Silo Elevators (2)**
Blended kiln feed is transferred to the kiln by bucket elevators. The elevators are equipped with a baghouse.

II.A.9 **411.BF1 and 2: Kiln Feed Blending Silos (2)**
Raw material is blended in one of two blending silos prior to feeding the kiln. The blending silos are controlled by one common baghouse.

II.A.10 **414.BF1: Kiln Feed Alleviator**
A baghouse controls particulate from the central material silo between the blending silos and the preheater. Raw feed is removed from the system near the top of the preheater tower.

II.A.11 **419.BF1: Clinker Cooler**
Grate type cooler used for cooling clinker from the kiln prior to transfer to clinker storage. The clinker cooler vent air is controlled by a baghouse.

II.A.12 **419.BF8: Clinker Belt Transfer**
Clinker is removed from the clinker cooler by drag chains and dropped onto one of the clinker conveyor belts. The transfer points are controlled by a baghouse.

II.A.13 **419.BF2 and 514.BF3: Clinker Silos**

Clinker from the clinker cooler is transferred to one of three storage silos. Emissions generated when loading the east and west clinker silos are controlled by baghouse 514.BF3. Emissions generated when loading the out-of-spec silo are controlled by baghouse 419.BF2.

II.A.14 **514.BF3: East Clinker Belt**

Clinker from the clinker cooler is transferred into the East clinker silo by conveyor belt. The discharge from the belt is controlled by a baghouse.

II.A.15 **514.BF3: West Clinker Belt**

Clinker from the clinker cooler is transferred into the West clinker silo by conveyor belt. The discharge from the belt is controlled by a baghouse.

II.A.16 **511.BF3: Clinker Reclaim Hopper**

Imported clinker is fed to the clinker tunnel conveyor belt by the outside clinker hopper. Emissions during transfer of clinker to the conveyor are controlled by a baghouse that discharges into the clinker tunnel.

II.A.17 **511.BF1: East Clinker Silo Discharge**

Produced clinker is fed to the clinker tunnel conveyor belt from the East clinker storage silo. Emissions during transfer of clinker to the conveyor are controlled by a baghouse that discharges into the clinker tunnel.

II.A.18 **511.BF2: West Clinker Silo Discharge**

Produced clinker is fed to the clinker tunnel conveyor belt from the West clinker storage silo. Emissions during transfer of clinker to the conveyor are controlled by a baghouse that discharges into the clinker tunnel.

II.A.19 **511.BF4: Gypsum Silo Discharge**

Gypsum is fed to the clinker tunnel conveyor belt from the gypsum storage silo. Emissions during transfer of gypsum to the conveyor are controlled by a baghouse that discharges into the clinker tunnel.

II.A.20 **512.SX1: Gypsum Silo**

Gypsum is stored in the gypsum storage silo. A baghouse is installed on the gypsum storage silo to control dust during loading.

II.A.21 **514.BF2: Finish Mill**

The finish mill grinds clinker and gypsum to produce finished cement product. Dust generated during milling is captured by a baghouse.

II.A.22 **514.BF1: Finish Mill Separator**

After clinker and gypsum are ground into cement product, a separator returns the oversized cement particles to the finish mill. Dust generated by the finish mill separator is collected by a baghouse.

II.A.23 **611.BF1: Finish Cement Storage Silos**

There are six storage and two interstice silos where the finished cement product is stored. A single common baghouse is located on top of the silos and is used to control emissions during loading and unloading operations.

II.A.24 **611.BF2: North Cement Load Out**

The cement loadout system located on the North side of the silos (rail load out side) is controlled by a baghouse during unloading from the silos for rail shipping.

II.A.25 **611.BF3: South Cement Load Out**

The cement loadout system located on the South side of the silos (truck load out side) is controlled by a baghouse during unloading from the silos for truck shipping.

II.A.26 **41B.BF1: Coal Silo**

Storage of coal for grinding to powder, which is subsequently fired in the kiln and calciner. The coal storage silo is equipped with a baghouse.

II.A.27 **41B.BF2: Coal Grinding System**

Coal is ground in a coal mill. Gases drawn from the preheater for the kiln entrain the coal in the mill and are dedusted in a baghouse.

II.A.28 **316.BF1 thru 5: Raw Mill Recirculation**

Larger particles are removed from the raw mill, recirculated, and re-introduced into the raw mill feed. This system includes vibrating feeders, a conveyor system, and surge bin. Emissions are controlled by five equivalent baghouses.

II.A.29 **511.BF1 thru 4: Clinker Tunnel Exitway**

The clinker reclaim hopper baghouse (511.BF3), east clinker silo discharge baghouse (511.BF1), west clinker silo discharge baghouse (511.BF2), and gypsum silo discharge baghouse (511.BF4) all discharge in the clinker tunnel. Emissions are discharged through the tunnel exitway.

II.A.30 **MHO: Materials Handling Operation**

Includes the following emission units: 315.SX1 thru 4; 315.BF2; 316.BF1 thru 5; 316.BF6; 411.BF1 & 2; 412.BF1 & 2; 414.BF1; 419.BF8; 514.BF3; 419.BF2; 511.BF1 thru 4; 512.SX1; 611.BF1; 611.BF2; 611.BF3; 512.BF2 & 3.

II.A.31 **316.BF6: Cross-Belt Analyzer**

Used for quality control. Emissions are controlled by a baghouse.

II.A.32 **LBS: Limestone Bypass System**

Additional limestone is added to the clinker and gypsum by the limestone bypass system (LBS). The LBS consists of a screen and conveyors. Emissions are controlled by water sprays at the screen and material handling drop points.

II.A.33 **512.BF2 and 3: Limestone Silo & Belt**

Limestone is stored in the limestone storage silo and transferred to the finish mill by conveyor belt. Emissions from the silo and conveyor are controlled by two baghouses. 512.BF2 discharges in the clinker tunnel. 512.BF3 is located on top of the silo.

II.A.34 **311.BC1: Belt Conveyor Transfer Baghouse**

Located prior to raw materials processing, this baghouse controls emissions from the conveyor belt that transfers the stacked material to the raw material silos.

II.B Requirements and Limitations

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated:

II.B.1 **Conditions on permitted source (Source-wide)**

II.B.1.a **Condition:**

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any permitted plant equipment, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(2) and 40 CFR 60.11(d) and 40 CFR 63.6 (Subpart A).

II.B.1.a.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.a.2 **Recordkeeping:**

Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.b **Condition:**

The permittee shall comply with the applicable requirements for recycling and emission reduction for class I and class II refrigerants pursuant to 40 CFR 82, Subpart F - Recycling and Emissions Reduction. [Origin: 40 CFR 82] Authority: 40 CFR 82.150(b).

II.B.1.b.1 **Monitoring:**

The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart F.

II.B.1.b.2 **Recordkeeping:**

All records required in 40 CFR 82, Subpart F shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.

II.B.1.b.3 **Reporting:**

All reports required in 40 CFR 82, Subpart F shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.1.c **Condition:**

The permittee shall comply with the applicable requirements for servicing of motor vehicle air conditioners pursuant to 40 CFR 82, Subpart B - Servicing of Motor Vehicle Air Conditioners. [Origin: 40 CFR 82] Authority: 40 CFR 82.30(b).

II.B.1.c.1 **Monitoring:**

The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart B.

II.B.1.c.2 **Recordkeeping:**

All records required in 40 CFR 82, Subpart B shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.

II.B.1.c.3 **Reporting:**

All reports required in 40 CFR 82, Subpart B shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.1.d **Condition:**

Visible emissions shall be no greater than 20 percent opacity unless otherwise specified in this permit. [Origin: R307-201-3(2) & DAQE-AN0103030015-07] Authority: R307-201-3(2).

II.B.1.d.1 **Monitoring:**

(a) The permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.
(b) If no visible emissions are observed in six consecutive monthly tests for any affected source, the permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the permittee must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
(c) If no visible emissions are observed during the semi-annual test for any affected source, the permittee may decrease the frequency of testing from semiannually to annually for that affected source. If visible emissions are observed during any annual test, the permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
(d) If visible emissions are observed during any Method 22 test, the permittee shall conduct a
    i. six minute test of opacity in accordance with 40 CFR 60, Appendix A, Method 9 for point sources, or
    ii. one minute test of opacity with five second observation intervals in accordance with 58 FR 61640 Method 203C for fugitive emission sources

The Method 9 or 203C test must begin within one hour of any observation of visible emissions.

II.B.1.d.2 **Recordkeeping:**

Records of visible emission tests performed and data required by 40 CFR 60, Appendix A, Method 22, Method 9, or 58 FR 61640, Method 203C shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.e **Condition:**

All unpaved roads, other unpaved operational areas that are used by mobile equipment, and all disturbed surfaces not involved with operations shall be water sprayed and/or chemically treated to control fugitive dust. Treatment shall be of sufficient frequency and quantity to minimize fugitive dust as necessary to meet any applicable opacity limitations of this permit. The permittee is not required to apply water to surfaces during freezing conditions. If chemical treatment is to be used, the plan shall be pre-approved by the Executive Secretary. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.1.e.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.e.2 **Recordkeeping:**

Instances of water and/or chemical application to unpaved areas shall be recorded and maintained by the permittee. The ambient temperature shall be recorded any time water should be applied but can not be due to freezing conditions.

II.B.1.e.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.f **Condition:**

All paved roads and paved operational areas shall be swept and/or water sprayed to minimize fugitive dust. The sweeping and/or water spray shall be conducted as dry conditions warrant or as determined necessary by the Executive Secretary. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.1.f.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.f.2 **Recordkeeping:**

Instances of each sweeping event or water application to the paved areas shall be recorded and maintained by the permittee.

II.B.1.f.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.g **Condition:**

For all emission units subject to 40 CFR 63 Subpart LLL:

The permittee shall prepare and implement an operation and maintenance (O & M) plan in accordance with 40 CFR 63.1350(a). The plan shall include the following elements:

(A) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission and operating limits of this permit.
(B) Corrective actions to be taken if visible emissions are observed from the raw mill and finish mill sweep and air separator pollution control devices during a daily Method 22 test.
(C) Procedures to be used during an inspection of the components of the combustion system of the

in-line kiln/raw mill which is to be performed at least once per year.

(D) Procedures to be used to periodically monitor affected sources other than in-line kiln/raw mills, clinker coolers, and finish mills which are subject to opacity standards.

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard. [Origin: 40 CFR 63 (Subpart LLL)] Authority: 40 CFR 63.1350.

II.B.1.g.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.g.2 **Recordkeeping:**

The permittee shall maintain files of all information (including all reports and notifications) required by this condition in a form suitable and readily available for expeditious inspection and review. These files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. Requirements of Provision I.S.1 of this permit also apply.

II.B.1.g.3 **Reporting:**

In addition to the requirements in Section I of this permit, one summary report shall be submitted semiannually for the hazardous air pollutants monitored at each affected source. The summary report shall be entitled "Summary Report - Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall contain the following information:

(A) The company name and address of the affected source;
(B) An identification of each hazardous air pollutant monitored at the affected source;
(C) The beginning and ending dates of the reporting period;
(D) A brief description of the process units;
(E) The emission and operating parameter limitations from 40 CFR 63 Subpart LLL;
(F) The monitoring equipment manufacturer(s) and model number(s);
(G) All exceedances of maximum control device inlet gas temperature limits;
(H) All failures to calibrate thermocouples and other temperature sensors as required,
(I) All failures to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable;
(J) The results of any combustion system component inspections conducted within the reporting period;
(K) All failures to comply with any provision of the operation and maintenance plan;
(L) The date of the latest CMS certification or audit;
(M) The total operating time of the affected source during the reporting period;
(N) An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
(O) A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality

assurance/quality control calibrations, other known causes, and other unknown causes;
(P) A description of any changes in CMS, processes, or controls since the last reporting period;
(Q) The name, title, and signature of the responsible official who is certifying the accuracy of the report; and
(R) The date of the report.

The owner or operator shall submit all reports to the Executive Secretary as well as a copy of each report to the EPA Regional office at:

EPA Region VIII
Director
Air and Toxics Division
1595 Wynkoop Street
Denver, CO 80202-1129

The regional office may waive this requirement for any reports at its discretion. (origin: 40 CFR 63.10(e)(3)(vi) via 40 CFR 63.1354(b)(9))

II.B.1.h **Condition:**

For all emission units subject to 40 CFR 63 Subpart LLL:

(i) The permittee must implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the affected emission unit during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard. [40 CFR 63.6(e)(3)(i)]
(ii) During periods of startup, shutdown, and malfunction, the permittee must operate and maintain the affected emission unit (including associated air pollution control and monitoring equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under paragraph (i) of this condition. [40 CFR 63.6(3)(3)(ii)]
(iii) The permittee must maintain a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by the Executive Secretary. In addition, if the startup, shutdown, and malfunction plan is subsequently revised as provided in paragraph (v) of this condition, the permittee must maintain each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and must make each such previous version available for inspection and copying by the Executive Secretary for a period of 5 years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected emission unit ceases operation or is otherwise no longer subject to the provisions of 40 CFR 63, the permittee must retain a copy of the most recent plan for 5 years from the date the affected emission unit ceases operation or is no longer subject to 40 CFR 63 and must make the plan available upon request for inspection and copying by the Executive Secretary. [40 CFR 63.6(e)(3)(v)]
(iv) To satisfy the requirements of this condition to develop a startup, shutdown, and malfunction plan, the permittee may use the affected emission unit's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this condition and are made available for inspection when requested by the Executive Secretary. [40 CFR 63.6(e)(3)(vi)]

(v) The permittee may periodically revise the startup, shutdown, and malfunction plan as necessary to satisfy the requirements of 40 CFR 63 or to reflect changes in equipment or procedures at the affected emission unit. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by this permit. If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the permittee developed the plan, the permittee must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the

affected emission unit during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the permittee makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the affected emission unit which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under 40 CFR 63, the revised plan shall not take effect until after the permittee has provided a written notice describing the revision to the permitting authority. [40 CFR 63.6(e)(3)(viii)]

(vi) Any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by 40 CFR 63 shall not be deemed to constitute permit revisions under this permit. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan shall be deemed to fall within the permit shield provision in this permit. [40 CFR 63.6(e)(3)(ix)] [Origin: 40 CFR 63 (Subpart LLL)] Authority: 40 CFR 63 Subpart A, LLL.

II.B.1.h.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.h.2 **Recordkeeping:**

The permittee shall maintain relevant records for the affected emission unit of-

(i) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment); [40 CFR 63.10(b)(2)(i)]

(ii) The occurrence and duration of each malfunction of the required air pollution control and monitoring equipment; [40 CFR 63.10(b)(2)(ii)]

(iii) All required maintenance performed on the air pollution control and monitoring equipment; [40 CFR 63.10(b)(2)(iii)]

(iv) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the startup, shutdown, and malfunction plan; [40 CFR 63.10(b)(2)(iv)]

(v) All information necessary to demonstrate conformance with the startup, shutdown, and malfunction plan when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. [40 CFR 63.6(e)(3)(iii) & 40 CFR 63.10(b)(2)(v)]

(vi) If an action taken by the permittee during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the startup, shutdown, and malfunction plan, and the affected emission unit exceeds any applicable emission limitation in the relevant emission standard, then the permittee must record the actions taken for that event. [40 CFR 63.6(e)(3)(iv)]

The permittee shall maintain files of all information (including all reports and notifications) required by this condition recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche. [40 CFR 63.1355(a) & 40 CFR 63.10(b)(1)]

Requirements of Provision I.S.1 of this permit also apply.

II.B.1.h.3 **Reporting:**

In addition to the reporting requirements specified in Section I of this permit, in the event of a startup, shutdown or malfunction, the following reporting requirements shall be followed:

(i) Periodic startup, shutdown, and malfunction reports. If actions taken by the permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the startup, shutdown, and malfunction plan, the permittee shall state such information in a startup, shutdown, and malfunction report. Otherwise, such a report shall identify any instance where any action taken by a permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the startup, shutdown, and malfunction plan, but the affected emission unit does not exceed any applicable emission limitation in the relevant emission standard. Such a report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report shall consist of a letter, containing the name, title, and signature of the responsible official who is certifying its accuracy, that shall be submitted to the Executive Secretary semiannually. The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day following the end of each calendar half. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports. [40 CFR 63.1354(b)(4) & 40 CFR 63.10(d)(5)(i) & 40 CFR 63.6(e)(3)(iii)]

(ii) Immediate startup, shutdown, and malfunction reports. If an action taken by the permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the startup, shutdown, and malfunction plan, the permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event. The immediate report required under this paragraph shall consist of a telephone call or facsimile (FAX) transmission to the Executive Secretary within 2 working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within 7 working days after the end of the event, that contains the name, title, and signature of the responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and describing all excess emissions and/or parameter monitoring exceedances which are believed to have occurred. [40 CFR 63.6(e)(3)(iv) & 40 CFR 63.10(d)(5)(ii) & 40 CFR 63.1354(b)(5)]

II.B.1.i **Condition:**

Visible emissions shall be no greater than 10 percent opacity from the baghouses unless otherwise specified in this permit. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.1.i.1 **Monitoring:**

(a) The permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.

(b) If no visible emissions are observed in six consecutive monthly tests for any affected source, the permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the permittee must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(c) If no visible emissions are observed during the semi-annual test for any affected source, the permittee may decrease the frequency of testing from semi-annually to annually for that

affected source. If visible emissions are observed during any annual test, the permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(d) If visible emissions are observed during any Method 22 test, the permittee shall conduct a 6-minute test of opacity in accordance with 40 CFR 60, Appendix A, Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.

II.B.1.i.2 **Recordkeeping:**

Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9 for each determination shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.i.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2 **Conditions on Stationary Crusher (211.BF1)**

II.B.2.a **Condition:**

Permittee shall operate water sprays or dust suppression sprays to control fugitive emissions. The sprays shall operate whenever dry conditions warrant or as determined necessary by the Executive Secretary. Sprays shall not be required during periods of freezing temperatures. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.2.a.1 **Monitoring:**

Visual inspections of the water spray system(s) shall be made weekly to ensure proper operating condition.

II.B.2.a.2 **Recordkeeping:**

An operator's log shall be maintained of all monitoring provisions listed above. Records of water spray system inspections shall be kept for all periods of operation and the ambient temperature shall be recorded any time water should be applied but can not be due to freezing conditions.

II.B.2.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.b **Condition:**

Visible emissions shall be no greater than 10 percent opacity from the baghouse. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.2.b.1 **Monitoring:**

Compliance with the visible emission limitation shall be demonstrated by one of the following options.

Option A:

(I) Measurement Approach: The permittee shall monitor opacity by conducting daily visual emissions observations in accordance with the procedures of 40 CFR 60, Appendix A,

Method 22.

(II) Indicator Range: An excursion is defined as the presence of visible emissions. If visible emissions are observed during any Method 22 visible emissions test, the permittee shall:
   a) Initiate corrective actions, within one-hour; and
   b) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with 40 CFR 60, Appendix A, Method 9. The duration of the Method 9 test shall be 30 minutes.

(III) Performance Criteria:
   (a) Data Representativeness: The Method 22 test shall be conducted while the affected unit is operating at representative performance conditions.
   (b) QA/QC Practices and Criteria: The visual observer shall be familiar with 40 CFR, Appendix A, Method 22 and follow Method 22 procedures. The opacity determination shall be conducted by a certified VEO in accordance with 40 CFR 60, Appendix A, Method 9.
   (c) Monitoring Frequency: A Method 22 observation shall be performed daily for each affected unit. The duration of the Method 22 test shall be 6 minutes
   (d) Data Collection Procedure: The observation shall be documented by the observer and all data required by 40 CFR 60, Appendix A, Method 9 shall be maintained if the opacity determination is conducted.
   (e) Averaging Period: None

Option B:

(I) Measurement Approach: A BLDS shall be installed on the baghouse exhaust stack and generate a signal proportional to PM concentration. An alarm shall sound when the signal exceeds a preset limit.

(II) Indicator Range: An excursion is defined as a signal greater than or equal to 50% of scale during normal operating conditions. Excursions trigger an inspection, corrective action, and a reporting requirement. The permittee shall maintain and operate the fabric filter such that the bag leak detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month block period. Each time the alarm activates, alarm time shall be counted as the actual amount of time taken by the permittee to initiate corrective actions. If inspection of the fabric filter demonstrates that no corrective actions are necessary, no alarm time shall be counted.

(III) Performance Criteria:
   a. Data Representativeness:
      1) For a positive-pressure fabric filter, the bag leak detector shall be installed in the exit vent. For a negative-pressure or induced-air fabric filter, the bag leak detector shall be installed downstream of the fabric filter. If multiple bag leak detectors are required (for either type of fabric filter), detectors may share the system instrumentation and alarm.
      2) The baseline output of the system shall be established as follows:
         a) Adjust the range and the averaging period of the device; and
         b) Establish the alarm set points and the alarm delay time.
      3) The sensor on the BLDS shall provide output of relative PM emissions.
      4) The BLDS shall have an alarm that will activate automatically when it detects PM emissions greater than or equal to 50% of scale during normal operating conditions.
      5) The presence of an alarm condition shall be clearly apparent to facility operating personnel.
   b. QA/QC Practices and Criteria:
      1) The probe shall be inspected at least monthly for dust buildup.

2) Lens cleaning, O-ring replacement, and window value rechecks shall be performed at least annually.
3) The BLDS shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. "Certify" shall mean that the instrument manufacturer has tested the instrument on gas streams having a range of particle size distributions and confirmed by means of valid filterable PM tests that the minimum detectable concentration limit is at or below 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
4) All BLDS shall be installed, operated, adjusted, and maintained so that they are based on the manufacturer's written specifications and recommendations.
5) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time shall not be adjusted except as specified in the BLDS standard operating procedure (SOP). In no event shall the range be increased by more than 100 percent or decreased by more than 50 percent over a 1 calendar year period unless a responsible official as defined in R307-415-3 certifies in writing to the executive secretary that the fabric filter has been inspected and found to be in good operating condition.

c. Monitoring Frequency: The BLDS signal shall be monitored continuously.
d. Data Collection Procedure: The instantaneous values from the transmitter output shall be displayed and recorded. All alarms shall be logged electronically.
e. Averaging Period: None.

II.B.2.b.2 **Recordkeeping:**

The following records shall be maintained in accordance with Provision I.S.1 of this permit:

(a) The permittee shall continuously record the output from the BLDS during periods of normal operation. Normal operation does not include periods when the BLDS is being maintained or during startup, shutdown or malfunction.
(b) Alarm times as defined in Monitoring shall be recorded.
(c) Records of visual emission observations and visual opacity tests required by 40 CFR 60, Appendix A, Methods 22 and 9 shall be maintained if a BLDS is not used.

In addition to the recordkeeping requirements described in Provision I.S.1 of this permit, the permittee shall maintain a file of the occurrence and duration of any excursion, corrective actions taken, and any other supporting information required to be maintained under 40 CFR 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Instead of paper records, the permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. (40 CFR 64.9(b)).

II.B.2.b.3 **Reporting:**

In addition to the reporting requirement described in Provision I.S.2 of this permit, the monitoring report shall include, at a minimum, the following information, as applicable:
(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;(40 CFR 64.9(a)(2)(i))
(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable). (40 CFR 64.9(a)(2)(ii))

II.B.3 **Conditions on Raw Material Transfer (211.BF2)**

II.B.3.a **Condition:**

Visible emissions shall be no greater than 10 percent opacity. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.3.a.1 **Monitoring:**

(a) The permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.
(b) If no visible emissions are observed in six consecutive monthly tests for any affected source, the permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the permittee must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
(c) If no visible emissions are observed during the semi-annual test for any affected source, the permittee may decrease the frequency of testing from semiannually to annually for that affected source. If visible emissions are observed during any annual test, the permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
(d) If visible emissions are observed during any Method 22 test, the permittee shall conduct a six minute test of opacity in accordance with 40 CFR 60, Appendix A, Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.

II.B.3.a.2 **Recordkeeping:**

Records of visible emission tests performed and data required by 40 CFR 60, Appendix A, Method 22 and 9 shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.b **Condition:**

Permittee shall operate water sprays or dust suppression sprays to control fugitive emissions. The sprays shall operate whenever dry conditions warrant or as determined necessary by the Executive Secretary. Sprays shall not be required during periods of freezing temperatures. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.3.b.1 **Monitoring:**

Visual inspections of the water spray system(s) shall be made weekly to ensure proper operating condition.

II.B.3.b.2 **Recordkeeping:**

An operator's log shall be maintained of all monitoring provisions listed above. Records of water spray system inspections shall be kept for all periods of operation and the ambient temperature shall be recorded any time water should be applied but can not be due to freezing conditions.

II.B.3.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4 **Conditions on Kiln & Pre-Calciner and Raw Mill (317.BF1)**

II.B.4.a **Condition:**

Emissions of particulate matter shall be no greater than 0.30 lbs per ton (0.15 kg/Mg) of kiln feed (dry basis). [Origin: DAQE-AN0103030015-07 & 40 CFR 63 (Subpart LLL)] Authority: R307-401-8(1)(a) [BACT] & 40 CFR 63 (Subpart LLL).

II.B.4.a.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested every five (5) years, based on the date of the most recent stack test. Tests may also be required at the direction of the Executive Secretary.

(b) Notification. At least 60 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.
  (1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approvable access shall be provided to the test location.
  (2) Sample Method - 40 CFR 60, Appendix A, Method 5 shall be used to determine particulate matter emissions and the volumetric flow rate of the effluent gas. Each test shall consist of three separate runs. Each run shall be conducted for at least one hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. The emission rate of particulate matter shall be computed for each run using the equation in 40 CFR 63.1349(b)(1).

(d) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.4.a.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.4.a.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.b **Condition:**

Emissions of PM_{10} shall be no greater than 20.5 lbs/hr. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.4.b.1 **Monitoring:**

(a) Stack testing shall be performed as specified below:

(i) Frequency. Emissions shall be tested every three years. Tests may also be required at the direction of the Executive Secretary.

(ii) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(iii) Methods.
a. Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) and/or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.
b. For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201 or 201a. Method 202 may be used to measure condensible particulate matter.
c. For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate. The back half condensibles shall also be tested using a method specified by the Executive Secretary. All particulate captured shall be considered PM_{10}.
d. The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

(iv) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.

(v) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

(b) Optical density shall be used as an indicator to provide reasonable assurance of compliance with the PM_{10} emission limitation as specified below.

(i) Measurement Approach: Opacity shall be determined using a continuous opacity monitor (COM) located in the exhaust stack. The opacity shall be mathematically converted to units of optical density.
(ii) Indicator Range: An excursion is defined as a 24-hour block average optical density in excess of 0.041 excluding periods of startup, shutdown, or malfunction. Excursions trigger an inspection, corrective action, and a reporting requirement.
Once every three years, during the stack test required in (a) above, the permittee shall acquire new test data to evaluate or update the excursion optical density value. The procedure for collecting new test data is described in a reviewer comment at the end of this permit.
(iii) Performance Criteria:
a. Data Representativeness: The COM shall be installed in a representative location in the exhaust stack and shall be calibrated, maintained, and operated in accordance with 40 CFR Part 60 Appendix B Performance Specification 1 and R307-170.
b. QA/QC Practices and Criteria: The COM shall be calibrated, maintained, and

operated in accordance with 40 CFR Part 60 Appendix B Performance Specification 1, R307-170, and the manufacturer's written recommendations.

c. Monitoring Frequency: Opacity shall be monitored continuously and a data point recorded electronically every 10 seconds.
d. Data Collection Procedure: The 10-second opacity data shall be used to calculate 6-minute opacity averages. The 6-minute opacity averages shall be mathematically converted to units of optical density. The 6-minute optical density values shall be averaged over a 1-hour block. The 1-hour optical density averages shall be used to calculate a 24-hour block average. The 24-hour block average optical density shall be recorded and stored electronically.
e. Averaging Period: 24-hour block average.

II.B.4.b.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

Records of the 24-hour block average optical density values shall be maintained in accordance with Provision I.S.1 of this permit. In addition, the permittee shall maintain records of:

a) all test data from the most recent stack test and the calculations that were used to evaluate or revise the excursion optical density value.
b) all continuous opacity monitor (COM) parameters, performance test measurements, all COM performance evaluations, all COM calibration checks, all COM adjustments and maintenance, and all other information required by R307-170 in a permanent form suitable for inspection.
c) the occurrence and duration of any excursion, corrective actions taken, and any other supporting information required to be maintained under 40 CFR 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Instead of paper records, the permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. (40 CFR 64.9(b)).

II.B.4.b.3 **Reporting:**

In addition to the reporting requirements in Provision I.S.2 of this permit,

(a) Monitoring reports shall include, at a minimum, the following information, as applicable:
  (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;(40 CFR 64.9(a)(2)(i))
  (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable). (40 CFR 64.9(a)(2)(ii))
(b) The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status.

II.B.4.c **Condition:**

Visible emissions shall be no greater than 20 percent opacity. [Origin: DAQE-AN0103030015-07] Authority: 40 CFR 63, Subpart LLL.

II.B.4.c.1 **Monitoring:**

The permittee shall calibrate, maintain and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere in accordance with R307-170 and 40 CFR 63.8 (Subpart A), and shall record the output of the system. The output shall be reviewed at least monthly for compliance with the opacity limit; compliance is to be based on the percent opacity averaged over six consecutive minutes.

II.B.4.c.2 **Recordkeeping:**

Results of opacity observations shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.4.c.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit.

The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.4.d **Condition:**

Emissions of NO_x shall be no greater than 2,165 tons per rolling 12-month period. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.4.d.1 **Monitoring:**

While the affected emission unit is operating, hourly NO_x emission rates expressed in tons per hour shall be determined in accordance with R307-170 using the appropriate conversion factors. The applicable performance specification in R307-170 shall be 40 CFR 60, Appendix B, Performance Specification 6 - "Specifications and Test Procedures for Continuous Emission Rate Monitoring Systems in Stationary Sources". By the 25th day of each month a new 12-month NO_x emission total for the common stack shall be calculated as the sum of the monthly NO_x emission totals for each of the previous 12 months.

II.B.4.d.2 **Recordkeeping:**

The permittee shall keep the records specified in R307-170-8 and any additional records required by provision I.S.1 of this permit. These records shall be maintained in accordance with Provision I.S.1.

II.B.4.d.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit.

The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.4.e **Condition:**

The permittee shall use only the following fuels in the kiln and pre-calciner:

A. Coal
B. Diaper Derived Fuel (DDF)
C. Tire Derived Fuel (TDF)
D. Natural Gas
E. Coke
F. Fuel Oil
G. Used Oil Fuel
H. Synthetic Fuel
I. Wood
J. Coal Additives consisting of alternative fuels approved by the Executive Secretary. Prior to burning any proposed coal additive, the permittee shall obtain approval from the Executive Secretary. To obtain approval, the permittee shall submit Material Safety Data Sheets (MSDS) or the results of suitable tests giving data similar to a Proximate and Ultimate analysis of the proposed coal additive.

   Approval by the Executive Secretary shall consist of a letter approving the use of the proposed coal additive. Approval is not required to change from one previously approved coal additive to another previously approved coal additive.

   The average quantity of coal additives burned shall not be greater than 15% of the total daily heat input of the kiln and precalciner. The permittee may increase the average quantity of coal additives up to 25% of the total daily heat input of the kiln and precalciner upon approval by the Executive Secretary in accordance with the approval process described for new coal additives above.

Additionally, the permittee shall be limited to a maximum TDF consumption not to exceed 15% of the combined energy input to the rotary kiln and pre-calciner. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT]

II.B.4.e.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.4.e.2 **Recordkeeping:**

Within the first 25 days of each month, a rolling 12-month total of fuel usage shall be determined using records from the previous 12 months. The fuel usage records shall include the type, quantity, and respective heating value for each material used as fuel. Copies of Executive Secretary approval of each coal additive shall be maintained. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.e.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.f **Condition:**

Consumption of used oil fuel shall be no greater than 85,724 gallons per rolling 12-month period. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.4.f.1 **Monitoring:**

Consumption shall be determined within the first 25 calendar days of each month, for the previous month, using purchase records and inventory information. The total shall then be added to the previous 11 months total for a 12 month rolling total.

II.B.4.f.2 **Recordkeeping:**

Records of used oil combusted shall be kept daily in a supervisor log for all periods when the plant is in operation. Records shall be kept in accordance with Provision I.S.1 of this permit.

II.B.4.f.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.g **Condition:**

Permittee shall meet the following requirements when used oil or tire derived fuel (TDF) is burned in the rotary kiln:

Combustion gas temperature at the rotary kiln exit shall not drop below 1500 degrees Fahrenheit for more than five minutes in any 60-minute period.

Oxygen content at the kiln system ID fan shall not drop below 2% for more than five minutes in any 60-minute period.

[Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT]

II.B.4.g.1 **Monitoring:**

The permittee shall continuously monitor the temperature and oxygen content at all times used oil or TDF is burned in the kiln using equipment approved by the Executive Secretary. Calibration procedure and frequency shall be according to manufacturers specifications. Use of factory calibrated thermocouples for temperature measurement is approved. All monitoring equipment for both temperature and oxygen shall be located such that an inspector can safely read the output at any time.

Additionally, the permittee shall monitor the quantities and times that used oil or TDF is burned in kiln.

II.B.4.g.2 **Recordkeeping:**

Permittee shall record the temperature and oxygen content at no less than every 5 minutes during operations when used oil or TDF is burned in the kiln. The permittee shall record the quantities and times when used oil or TDF is burned in the kiln.

II.B.4.g.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.h **Condition:**

The concentration of contaminants or parameters in any used oil fuel burned in the Kiln shall not exceed the following levels:

Arsenic 5 ppm by weight,
Barium 100 ppm by weight,
Cadmium 2 ppm by weight,
Chromium 10 ppm by weight,
Lead 100 ppm by weight,
Total Halogens 1,000 ppm by weight,
Sulfur 0.5 percent by weight, and
Flash Point not less than 100 degrees F.

Used oil exceeding any of the above contaminants shall not be burned until the permittee has submitted and received approval of a modeling analysis of the projected emissions for each contaminant from the Executive Secretary. The modeling analysis shall show in each case that the resulting concentration of contaminant in the ambient air does not exceed the TLV/100 value at the fence line for the given contaminant. Any used oil fuel that contains more than 1,000 ppm by weight of total halogens shall be considered a hazardous waste and shall not be burned in the kiln. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT]

II.B.4.h.1 **Monitoring:**

The permittee shall maintain test certification data for each load of used oil fuel received. Certification shall be either by permittee testing or test reports provided by the used oil fuel vendor. The used oil fuel shall be tested for halogen content by ASTM Method D-808-81, EPA Method 8240 or Method 8260 before used oil fuel is transferred to a holding tank or burned.

II.B.4.h.2 **Recordkeeping:**

Records of used oil fuel consumption and the test reports shall be kept for all periods when the plant is in operation.

II.B.4.h.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.i **Condition:**

As part of demonstration of compliance with the dioxin/furan emission limitation in this permit, the permittee shall operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limits (for both raw mill operating and not operating) as determined and established in accordance with 40 CFR 63.1349(b)(3)(iv). The permittee shall conduct an inspection of the components of the combustion system of each kiln or in-line kiln/raw mill at least once per year. [Origin: 40 CFR 63 (Subpart LLL)] Authority: 40 CFR 63, Subpart LLL.

II.B.4.i.1 **Monitoring:**

(a) The permittee shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to, or upstream of, PM control devices. The recorder response range shall include zero and 1.5 times either of the average temperatures established during the performance test. The reference method shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval.
(b) The permittee shall monitor and continuously record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to the PM control device.
(c) The three hour rolling average temperature shall be calculated as the average 180 successive one-minute average temperatures.
(d) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
(e) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average temperature must begin anew, without considering previous recordings.
(f) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

II.B.4.i.2 **Recordkeeping:**

The permittee shall comply with the recordkeeping requirements specified in 63.10 of the general provisions of 40 CFR 63, and those specified in Section I of this permit. Additionally, the permittee shall keep a log of the annual inspections of the components of the combustion system of each kiln or in-line kiln/raw mill.

II.B.4.i.3 **Reporting:**

The permittee shall comply with the reporting requirements specified in 63.10 of the general provisions of 40 CFR 63, Subpart A, provisions of 40 CFR 63.1354, and those specified in Section I of this permit.

II.B.4.j **Condition:**

Emissions of Dioxins/Furans (D/F) shall be no greater than 0.20 ng per dscm (8.7 x 10 ^-11 gr per dscf) (TEQ) corrected to seven percent oxygen or 0.40 ng per dscm (1.7 x 10 ^-10 gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 deg. C (400 deg. F) or less. [Origin: 40 CFR 63 (Subpart LLL)] Authority: 40 CFR 63 (Subpart LLL).

II.B.4.j.1 **Monitoring:**

(a) Frequency. Emissions shall be tested every 30 months. The source may also be tested at any time if directed by the Executive Secretary.

(b) Notification. At least 60 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.
(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60,

Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

(2) 40 CFR 60, Appendix A, Method 23 shall be used to determine the pollutant emission rate.

(3) 40 CFR 60, Appendix A, Method 2 shall be used to determine the volumetric flow rate.

(4) Performance tests shall be conducted separately while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. If the kiln or in-line kiln/raw mill is equipped with an alkali bypass, simultaneous performance tests of the kiln or in-line kiln/raw mill exhaust and the alkali bypass shall be performed; however, a performance test of the alkali bypass exhaust may be conducted when the raw mill of the in-line kiln/raw mill is not operating.

(5) Each performance test shall consist of three separate runs; each run shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40 CFR 63.7(e). The duration of each run shall be at least 3 hours, and the sample volume for each run shall be at least 2.5 dscm (90 dscf).

(6) The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD, and where applicable, the temperature at the inlet to the alkali bypass PMCD, must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report.

(7) One-minute average temperatures shall be calculated for each minute of each run of the test.

(8) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with 40 CFR 63.1344(b).

(9) If activated carbon injection is used for D/F control, the rate of activated carbon injection to the kiln or in-line kiln/raw mill exhaust, and where applicable, the rate of activated carbon injection to the alkali bypass exhaust, must be continuously recorded during the period of the Method 23 test, and the continuous injection rate record(s) must be included in the performance test report. In addition, the performance test report must include the brand and type of activated carbon used during the performance test and a continuous record of either the carrier gas flow rate or the carrier gas pressure drop for the duration of the test. The run average injection rate must be calculated for each run, and the average of the run average injection rates must be determined and included in the performance test report and will determine the applicable injection rate limit in accordance with §63.1344(c)(1).

(d) Calculations. The concentration shall be determined for each test run, and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance.

II.B.4.j.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.4.j.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.k **Condition:**

Sulfur content of fuel burned shall be no greater than 1.0 lbs sulfur/MMBtu for any mixture of coal nor 0.85 pounds sulfur per million gross Btu heat input for any oil except used oil or 0.5 percent by weight for any used oil. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.4.k.1 **Monitoring:**

Certification of fuels shall be either by permittee's testing or test reports from the fuel marketer. Methods for determining sulfur content of coal and fuel oil shall be those methods of the American Society for Testing and Materials, UAC R307-203-1(4)

(a) For determining sulfur content in coal, ASTM Methods D3177-75 or D4239-85 are to be used.
(b) For determining sulfur content in oil, ASTM Methods D2880-71 or D4294-89 are to be used.
(c) For determining the gross calorific (or Btu) content of coal, ASTM Methods D2015-77 or D3286-85 are to be used.

II.B.4.k.2 **Recordkeeping:**

Compliance with the above limitation shall be demonstrated by maintaining fuel receipt records showing sulfur content of the delivered fuel or maintaining records of all sulfur content testing performed on the delivered fuel.

II.B.4.k.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.l **Condition:**

Emissions of CO shall be no greater than 13,045 tons per rolling 12-month period and 6,600 pounds per hour. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.4.l.1 **Monitoring:**

While the affected emission unit is operating, hourly CO emission rates expressed in tons per hour shall be determined in accordance with R307-170 using the appropriate conversion factors. The applicable performance specification in R307-170 shall be 40 CFR 60, Appendix B, Performance Specification 6 - "Specifications and Test Procedures for Continuous Emission Rate Monitoring Systems in Stationary Sources". By the 25th day of each month a new 12-month CO emission total for the common stack shall be calculated as the sum of the monthly CO emission totals for each of the previous 12 months.

II.B.4.l.2 **Recordkeeping:**

The permittee shall keep the records specified in R307-170-8 and any additional records required by provision I.S.1 of this permit. These records shall be maintained in accordance with Provision I.S.1.

II.B.4.l.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit.

The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.4.m **Condition:**

Production of clinker shall be no greater than 962,265 tons per 12-month rolling period. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.4.m.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.4.m.2 **Recordkeeping:**

Daily records of clinker production and kiln feed rates shall be kept for all periods of operation. By the 25th day of each month, a new 12-month total shall be calculated for clinker production using data from the previous 12 months. Records shall be kept in a supervisor log and in accordance with Provision I.S.1 of this permit

II.B.4.m.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.n **Condition:**

No greater than 10 percent of the kiln gases shall be routed to the Coal Grinding System (designated as 41B.BF2). [Origin: Alternative Monitoring EPA Approval 11/6/02] Authority: 40 CFR 63.8(f) (Subpart A).

II.B.4.n.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.4.n.2 **Recordkeeping:**

Records verifying the percent of kiln gases routed to the coal grinding system shall be maintained in accordance with Provision I.S.1 of this permit and made available for review by the Executive Secretary or his representative.

II.B.4.n.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5 **Conditions on Clinker Cooler (419.BF1)**

II.B.5.a **Condition:**

Emissions of particulate matter shall be no greater than 0.10 lbs per ton (0.050 kg/Mg) of kiln feed (dry basis). [Origin: 40 CFR 63 (Subpart LLL)] Authority: R307-401-8(1)(a) [BACT] & 40 CFR 63 (Subpart LLL).

II.B.5.a.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested every five (5) years, based on the date of the most recent stack test. Tests may also be required at the direction of the Executive Secretary.
(b) Notification. At least 60 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.
(c) Methods.
  (1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approvable access shall be provided to the test location.
  (2) Sample Method - 40 CFR 60, Appendix A, Method 5 shall be used to determine particulate matter emissions and the volumetric flow rate of the effluent gas. Each test shall consist of three separate runs. Each run shall be conducted for at least one hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. The emission rate of particulate matter shall be computed for each run using the equation in 40 CFR 63.1349(b)(1).
(d) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.5.a.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.5.a.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.b **Condition:**

Emissions of PM_{10} shall be no greater than 10.4 lbs/hr. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.5.b.1 **Monitoring:**

(a) Stack testing shall be performed as specified below:

(i) Frequency. Emissions shall be tested every three years. The source may also be tested at any time if directed by the Executive Secretary.

(ii) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(iii) Methods.
a. Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.
b. For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201 or 201a. Method 202 may be used to measure condensible particulate matter.
c. For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate. The back half condensibles shall also be tested using a method specified by the Executive Secretary. All particulate captured shall be considered PM_{10}.
d. The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

(iv) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.

(v) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

(b) Optical density shall be used as an indicator to provide reasonable assurance of compliance with the PM_{10} emission limitation as specified below.
(i) Measurement Approach: Opacity shall be determined using a continuous opacity monitor (COM) located in the exhaust stack. The opacity shall be mathematically converted to units of optical density.
(ii) Indicator Range: An excursion is defined as a 24-hour block average optical density in excess of 0.046 excluding periods of startup, shutdown, or malfunction. Excursions trigger an inspection, corrective action, and a reporting requirement. Provision II.B.5.b.1(b)(ii) of this permit does not constitute a waiver, or a shield against enforcement, of Provision II.B.5.c of this permit.
Once every three years, during the stack test required in (a) above, the permittee shall acquire new test data to evaluate or update the excursion optical density value. The procedure for collecting new test data is described in a reviewer comment at the end of this permit.
(iii) Performance Criteria:
a. Data Representativeness: The COM shall be installed in a representative location in the exhaust stack and shall be calibrated, maintained, and operated in accordance with 40 CFR Part 60 Appendix B Performance Specification 1 and R307-170.
b. QA/QC Practices and Criteria: The COM shall be calibrated, maintained, and operated in accordance with 40 CFR Part 60 Appendix B Performance Specification 1, R307-170, and the manufacturer's written recommendations.

c. Monitoring Frequency: Opacity shall be monitored continuously and a data point recorded electronically every 10 seconds.
d. Data Collection Procedure: The 10-second opacity data shall be used to calculate 6-minute opacity averages. The 6-minute opacity averages shall be mathematically converted to units of optical density. The 6-minute optical density values shall be averaged over a 1-hour block. The 1-hour optical density averages shall be used to calculate a 24-hour block average. The 24-hour block average optical density shall be recorded and stored electronically.
e. Averaging Period: 24-hour block average.

II.B.5.b.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

Records of the 24-hour block average optical density values shall be maintained in accordance with Provision I.S.1 of this permit. In addition, the permittee shall maintain records of:

a) all test data from the most recent stack test and the calculations that were used to evaluate or revise the excursion optical density value.
b) all continuous opacity monitor (COM) parameters, performance test measurements, all COM performance evaluations, all COM calibration checks, all COM adjustments and maintenance, and all other information required by R307-170 in a permanent form suitable for inspection.
c) the occurrence and duration of any excursion, corrective actions taken, and any other supporting information required to be maintained under 40 CFR 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Instead of paper records, the permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. (40 CFR 64.9(b)).

II.B.5.b.3 **Reporting:**

In addition to the reporting requirements in Provision I.S.2 of this permit,
(a) Monitoring reports shall include, at a minimum, the following information, as applicable:
  (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corresponding actions taken;(40 CFR 64.9(a)(2)(i))
  (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable). (40 CFR 64.9(a)(2)(ii))
(b) The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status.

II.B.5.c **Condition:**

Visible emissions shall be no greater than 10 percent opacity. [Origin: DAQE-AN0103030015-07] Authority: 40 CFR 63 (Subpart LLL).

II.B.5.c.1 **Monitoring:**

The permittee shall calibrate, maintain and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere in accordance with R307-170 and 40 CFR 63.8 (Subpart A), and shall record the output of the system. The output shall be reviewed at least monthly for compliance with the opacity limit; compliance is to be based on the percent opacity averaged over six consecutive minutes.

II.B.5.c.2 **Recordkeeping:**

Results of opacity observations shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.5.c.3 **Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit.

The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.6 **Conditions on Finish Mill (514.BF2)**

II.B.6.a **Condition:**

Visible emissions shall be no greater than 10 percent opacity. [Origin: 40 CFR 63 (Subpart LLL) & DAQE-AN0103030015-07] Authority: 40 CFR 63, Subpart LLL.

II.B.6.a.1 **Monitoring:**

A. The permittee shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCD in accordance with the procedures of 40 CFR 60, Appendix A, Method 22. The Method 22 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 22 test shall be 6 minutes. If visible emissions are observed during any Method 22 visible emissions test, the permittee must:
   (1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with condition II.B.1.g of this permit; and
   (2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with 40 CFR 60, Appendix A, Method 9. The duration of the Method 9 test shall be 30 minutes.[origin: 40 CFR 63.1350(e) and Table 1 to 63.1350]

B. In lieu of the daily visual emissions testing required in paragraph A. above, the permittee may choose to install a continuous opacity monitor (COM) or bag leak detection system (BLDS).
   (1) If the permittee chooses to install a COM, it must be installed at the outlet of the PM control device of the mill. The COM must be installed, maintained, calibrated, and operated as required by 40 CFR 60, Appendix B, PS-1-'Specifications and Test Procedures for Continuous Opacity Monitoring Systems in Stationary Sources', 40 CFR 63.8 (Subpart A), and R307-170. To remain in compliance, the opacity must be

maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard. COM output shall be recorded. The output shall be reviewed at least monthly for compliance.

(2) If the permittee chooses to install a BLDS, the following requirements apply to each BLDS:

(a) The BLDS must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. "Certify" shall mean that the instrument manufacturer has tested the instrument on gas streams having a range of particle size distributions and confirmed by means of valid filterable PM tests that the minimum detectable concentration limit is at or below 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(b) The sensor on the BLDS must provide output of relative PM emissions.

(c) The BLDS must have an alarm that will activate automatically when it detects a significant increase in relative PM emissions greater than a preset level.

(d) The presence of an alarm condition should be clearly apparent to facility operating personnel.

(e) For a positive-pressure fabric filter, each compartment or cell must have a bag leak detector. For a negative-pressure or induced-air fabric filter, the bag leak detector must be installed downstream of the fabric filter. If multiple bag leak detectors are required (for either type of fabric filter), detectors may share the system instrumentation and alarm.

(f) All BLDS must be installed, operated, adjusted, and maintained so that they are based on the manufacturer's written specifications and recommendations.

(g) The baseline output of the system must be established as follows:

(i) Adjust the range and the averaging period of the device; and

(ii) Establish the alarm set points and the alarm delay time.

(h) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the operations and maintenance plan required by 40 CFR 63.1350(a). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 1 calendar year period unless a responsible official as defined in R307-415-3 certifies in writing to the Executive Secretary that the fabric filter has been inspected and found to be in good operating condition.

(i) The permittee must maintain and operate the fabric filter such that the bag leak detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month block period. Each time the alarm activates, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions. If inspection of the fabric filter demonstrates that no corrective actions are necessary, no alarm time will be counted.

[origin: 40 CFR 63.1350(m)]

C. Once every five years, the permittee shall demonstrate compliance with the opacity limit by conducting a test in accordance with 40 CFR 60, Appendix A, Method 9. The performance test shall be conducted under normal operating conditions in accordance with 40 CFR 63.7(e). The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in compliance with the standard. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (i) and (ii) apply:

(i) There are no individual readings greater than 10 percent opacity;

(ii) There are no more than three readings of 10 percent for the first 1-hour period.

(origin: 40 CFR 63.1349(b)(2), 40 CFR 63.1349(c))

At least 60 days before the performance test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.[origin: 40 CFR 63.9(e) via 40 CFR 63.1353(b)(2), (3)]

II.B.6.a.2 **Recordkeeping:**

The permittee shall maintain files of all information (including all reports and notifications) required by this condition in a form suitable and readily available for expeditious inspection and review. These files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. Requirements of Provision I.S.1 of this permit also apply. [origin: 40 CFR 63.1355]

Additionally, records of visual emission observations and visual opacity tests required by 40 CFR 60, Appendix A, Methods 22 and 9 shall be maintained in accordance with Provision I.S.1 of this permit if a COM or BLDS is not used.

If the COM option is used, results of opacity observations from the COM shall be recorded and maintained as required in R307-170, 40 CFR 63.10(c), and as described in Provision I.S.1 of this permit.

If the BLDS monitoring option is chosen, the following additional records shall be maintained in accordance with Provision I.S.1 of this permit:

(1) The permittee shall continuously record the output from the BLDS during periods of normal operation. Normal operation does not include periods when the BLDS is being maintained or during startup, shutdown or malfunction.
(2) Alarm times, as defined in the above monitoring, shall be recorded.

II.B.6.a.3 **Reporting:**

In addition to the reporting requirements of Provision I.S.1 of this permit, the reporting requirements of R307-170, 40 CFR 63.10(e), and 40 CFR 63.1354 also apply if a continuous monitoring method is used.

The five-year performance test results shall be documented in complete test reports that contain the information required by paragraphs (i) through (x), as well as all other relevant information. The plan to be followed during testing shall be made available to the Executive Secretary prior to testing, if requested.

(i) A brief description of the process and the air pollution control system;
(ii) Sampling location description(s);
(iii) A description of sampling and analytical procedures and any modifications to standard procedures;
(iv) Test results;
(v) Quality assurance procedures and results;
(vi) Records of operating conditions during the test, preparation of standards, and calibration procedures;
(vii) Raw data sheets for field sampling and field and laboratory analyses;
(viii) Documentation of calculations;
(ix) All data recorded and used to establish parameters for compliance monitoring; and
(x) Any other information required by the test method.

(origin: 40 CFR 63.1349(a))

II.B.7 **Conditions on Finish Mill Separator (514.BF1)**

II.B.7.a **Condition:**

Visible emissions shall be no greater than 10 percent opacity. [Origin: 40 CFR 63 (Subpart LLL) & DAQE-AN0103030015-07] Authority: 40 CFR 63, Subpart LLL.

II.B.7.a.1 **Monitoring:**

A. The permittee shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCD in accordance with the procedures of 40 CFR 60, Appendix A, Method 22. The Method 22 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 22 test shall be 6 minutes. If visible emissions are observed during any Method 22 visible emissions test, the permittee must:
   (1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with condition II.B.1.g of this permit; and
   (2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with 40 CFR 60, Appendix A, Method 9. The duration of the Method 9 test shall be 30 minutes.[origin: 40 CFR 63.1350(e) and Table 1 to 63.1350]

B. In lieu of the daily visual emissions testing required in paragraph A. above, the permittee may choose to install a continuous opacity monitor (COM) or bag leak detection system (BLDS).
   (1) If the permittee chooses to install a COM, it must be installed at the outlet of the PM control device of the mill. The COM must be installed, maintained, calibrated, and operated as required by 40 CFR 60, Appendix B, PS-1-'Specifications and Test Procedures for Continuous Opacity Monitoring Systems in Stationary Sources', 40 CFR 63.8 (Subpart A), and R307-170. To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard. COM output shall be recorded. The output shall be reviewed at least monthly for compliance.
   (2) If the permittee chooses to install a BLDS, the following requirements apply to each BLDS:
      (a) The BLDS must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. "Certify" shall mean that the instrument manufacturer has tested the instrument on gas streams having a range of particle size distributions and confirmed by means of valid filterable PM tests that the minimum detectable concentration limit is at or below 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
      (b) The sensor on the BLDS must provide output of relative PM emissions.
      (c) The BLDS must have an alarm that will activate automatically when it detects a significant increase in relative PM emissions greater than a preset level.
      (d) The presence of an alarm condition should be clearly apparent to facility operating personnel.

(e) For a positive-pressure fabric filter, each compartment or cell must have a bag leak detector. For a negative-pressure or induced-air fabric filter, the bag leak detector must be installed downstream of the fabric filter. If multiple bag leak detectors are required (for either type of fabric filter), detectors may share the system instrumentation and alarm.

(f) All BLDS must be installed, operated, adjusted, and maintained so that they are based on the manufacturer's written specifications and recommendations.

(g) The baseline output of the system must be established as follows:
(i) Adjust the range and the averaging period of the device; and
(ii) Establish the alarm set points and the alarm delay time.

(h) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the operations and maintenance plan required by 40 CFR 63.1350(a). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 1 calendar year period unless a responsible official as defined in R307-415-3 certifies in writing to the Executive Secretary that the fabric filter has been inspected and found to be in good operating condition.

(i) The permittee must maintain and operate the fabric filter such that the bag leak detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month block period. Each time the alarm activates, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions. If inspection of the fabric filter demonstrates that no corrective actions are necessary, no alarm time will be counted.

[origin: 40 CFR 63.1350(m)]

C. Once every five years, the permittee shall demonstrate compliance with the opacity limit by conducting a test in accordance with 40 CFR 60, Appendix A, Method 9. The performance test shall be conducted under normal operating conditions in accordance with 40 CFR 63.7(e). The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in compliance with the standard. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (i) and (ii) apply:
(i) There are no individual readings greater than 10 percent opacity;
(ii) There are no more than three readings of 10 percent for the first 1-hour period.
(origin: 40 CFR 63.1349(b)(2), 40 CFR 63.1349(c))

At least 60 days before the performance test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.[origin: 40 CFR 63.9(e) via 40 CFR 63.1353(b)(2), (3)]

II.B.7.a.2 **Recordkeeping:**

The permittee shall maintain files of all information (including all reports and notifications) required by this condition in a form suitable and readily available for expeditious inspection and review. These files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. Requirements of Provision I.S.1 of this permit also apply. [origin: 40 CFR 63.1355]

Additionally, records of visual emission observations and visual opacity tests required by 40 CFR 60, Appendix A, Methods 22 and 9 shall be maintained in accordance with Provision I.S.1 of this permit if a COM or BLDS is not used.

If the COM option is used, results of opacity observations from the COM shall be recorded and maintained as required in R307-170, 40 CFR 63.10(c), and as described in Provision I.S.1 of this permit.

If the BLDS monitoring option is chosen, the following additional records shall be maintained in accordance with Provision I.S.1 of this permit:

(1) The permittee shall continuously record the output from the BLDS during periods of normal operation. Normal operation does not include periods when the BLDS is being maintained or during startup, shutdown or malfunction.
(2) Alarm times, as defined in the above monitoring, shall be recorded.

II.B.7.a.3 **Reporting:**

In addition to the reporting requirements of Provision I.S.1 of this permit, the reporting requirements of R307-170, 40 CFR 63.10(e), and 40 CFR 63.1354 also apply if a continuous monitoring method is used.

The five-year performance test results shall be documented in complete test reports that contain the information required by paragraphs (i) through (x), as well as all other relevant information. The plan to be followed during testing shall be made available to the Executive Secretary prior to testing, if requested.

(i) A brief description of the process and the air pollution control system;
(ii) Sampling location description(s);
(iii) A description of sampling and analytical procedures and any modifications to standard procedures;
(iv) Test results;
(v) Quality assurance procedures and results;
(vi) Records of operating conditions during the test, preparation of standards, and calibration procedures;
(vii) Raw data sheets for field sampling and field and laboratory analyses;
(viii) Documentation of calculations;
(ix) All data recorded and used to establish parameters for compliance monitoring; and
(x) Any other information required by the test method.

(origin: 40 CFR 63.1349(a))

II.B.8 **Conditions on Coal Silo (41B.BF1)**

II.B.8.a **Condition:**

Visible emissions shall be less than 20 percent opacity. [Origin: 40 CFR 60 (Subpart Y) & DAQE-AN0103030015-07] Authority: 40 CFR 60.252(c) (Subpart Y).

II.B.8.a.1 **Monitoring:**

A visual observation of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visible emissions observer (VEO). If any visible emissions are observed, an opacity determination of that emission unit shall be performed by a certified VEO in accordance with 40 CFR 60, Appendix A, Method 9 within 24 hours of the initial observation. For each affected emission unit, if no visible emissions are observed for eight consecutive weeks the observation frequency shall be reduced to a monthly basis. If visible emissions are observed during any monthly observation the frequency shall revert back to a weekly basis.

II.B.8.a.2 **Recordkeeping:**

Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9 for each determination shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.8.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.9 **Conditions on Coal Grinding System (41B.BF2)**

II.B.9.a **Condition:**

Visible emissions shall be less than 20 percent opacity [Origin: 40 CFR 60 (Subpart Y)] Authority: 40 CFR 60.252(a),(c) (Subpart Y)

II.B.9.a.1 **Monitoring:**

A visual observation of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visible emissions observer (VEO). If any visible emissions are observed, an opacity determination of that emission unit shall be performed by a certified VEO in accordance with 40 CFR 60, Appendix A, Method 9 within 24 hours of the initial observation. For each affected emission unit, if no visible emissions are observed for eight consecutive weeks the observation frequency shall be reduced to a monthly basis. If visible emissions are observed during any monthly observation the frequency shall revert back to a weekly basis.

II.B.9.a.2 **Recordkeeping:**

Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9 for each determination shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.9.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.9.b **Condition:**

During all periods of operation, the permittee shall record the operating temperature of the Coal Grinding System baghouse. [Origin: Alternative Monitoring EPA Approval 11/6/02] Authority: 40 CFR 63.8(f).

II.B.9.b.1 **Monitoring:**

The permittee shall install and operate a temperature alarm on the baghouse inlet in accordance with the manufacturer's specifications.

II.B.9.b.2 **Recordkeeping:**

Records required by this permit condition and copies of the manufacturer's alarm specifications shall be maintained in accordance with Provision I.S.1 of this permit and made available for review by the Executive Secretary or his representative.

II.B.9.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.9.c **Condition:**

The permittee shall not cause to be discharged into the atmosphere from any thermal dryer gases which contain particulate matter in excess of 0.070 g/dscm (0.031 gr/dscf). [Origin: 40 CFR 60 (Subpart Y)] Authority: 40 CFR 60.252(a) (Subpart Y).

II.B.9.c.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Testing and Frequency. Emissions shall be tested every five years, based on the date of the most recent stack test. Tests may also be required at the direction of the Executive Secretary.
(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.
(c) Methods.
  (1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) and/or Mine Safety and Health Administration (MSHA)-approved access shall be provided to the test location.
  (2) Sample Method - 40 CFR 60. Appendix A, Method 5 shall be used to determine the particulate matter concentration and the volumetric flow rate of the effluent gas. The sampling time and sample volume shall be at least 60 minutes and 0.85 dscm (30 dscf). Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin.
(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.
(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

In addition to the stack testing requirements, the permittee shall install, calibrate, maintain, and continuously operate a monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device shall be certified by the manufacturer to be accurate within +/- 1.7 degrees Celsius (+/- 3 degrees Fahrenheit). The monitoring device shall be recalibrated annually in accordance with the manufacturer's written requirements or recommendations.

II.B.9.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit. In addition, results of all stack testing shall be recorded and maintained in accordance with the associated test method.

II.B.9.c.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.10 **Conditions on Materials Handling Operation (MHO)**

II.B.10.a **Condition:**

Visible emissions shall be no greater than 10 percent opacity from each affected unit. [Origin: 40 CFR 63 (Subpart LLL)] Authority: 40 CFR 63, Subpart LLL

II.B.10.a.1 **Monitoring:**

(a) Monitoring of visible emissions shall be performed as follows:
(1) The permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.
(2) If no visible emissions are observed in six consecutive monthly tests for any affected source, the permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the permittee must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
(3) If no visible emissions are observed during the semi-annual test for any affected source, the permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
(4) If visible emissions are observed during any Method 22 test, the permittee shall conduct a 6-minute test of opacity in accordance with 40 CFR 60, Appendix A, Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
(5) The requirement to conduct Method 22 visible emissions monitoring under this condition shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
(6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the permittee shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 1 through 4 of this condition for each such conveying system transfer point located within the building, or for the building itself, according to paragraph 7 of this condition.
(7) If visible emissions from a building are monitored, the requirements of paragraphs 1 through 4 of this condition apply to the monitoring of the building, and the permittee shall also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

(b) Once every five years, the permittee shall demonstrate compliance with the opacity limit by conducting a test in accordance with Method 9 of appendix A to 40 CFR part 60. The performance test shall be conducted under normal operating conditions in accordance with 40 CFR 63.7(e). The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in compliance with the standard. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (i) and (ii) apply:
(i) There are no individual readings greater than 10 percent opacity;
(ii) There are no more than three readings of 10 percent for the first 1-hour period.
(origin: 40 CFR 63.1349(b)(2), 40 CFR 63.1349(c))

At least 60 days before the performance test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.
[origin: 40 CFR 63.9(e) via 40 CFR 63.1353(b)(2), (3)]

II.B.10.a.2 **Recordkeeping:**

The permittee shall maintain files of all information (including all reports and notifications) required by this condition in accordance with Provision I.S.1 of this permit and in a form suitable and readily available for expeditious inspection and review. These files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

In addition, results from opacity observations and all data required by 40 CFR 60, Appendix A, Method 22 and 9 shall be recorded and maintained in accordance with Provision I.S.1 of this permit.

II.B.10.a.3 **Reporting:**

In addition to the reporting requirements specified in Section I of this permit, performance test results shall be documented in complete test reports that contain the information required by paragraphs (i) through (x), as well as all other relevant information. The plan to be followed during testing shall be made available to the Executive Secretary prior to testing, if requested.
(i) A brief description of the process and the air pollution control system;
(ii) Sampling location description(s);
(iii) A description of sampling and analytical procedures and any modifications to standard procedures;
(iv) Test results;
(v) Quality assurance procedures and results;
(vi) Records of operating conditions during the test, preparation of standards, and calibration procedures;
(vii) Raw data sheets for field sampling and field and laboratory analyses;
(viii) Documentation of calculations;
(ix) All data recorded and used to establish parameters for compliance monitoring; and
(x) Any other information required by the test method.
(origin: 40 CFR 63.1349(a))

II.B.10.b **Condition:**

The permittee shall notify the Executive Secretary in writing when the installation of new equipment in the affected unit has been completed and is operational, as an initial compliance inspection is required. To ensure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If installation has not been completed by January 23, 2009, the Executive Secretary shall be notified in writing on the status of the installation. At that time, the Executive Secretary shall require documentation of the continuous installation of the operation and may revoke the AO in accordance with R307-401-18, UAC. [Origin: DAQE-AN0103030015-07] Authority: R307-401-18.

II.B.10.b.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.10.b.2 **Recordkeeping:**

As applicable, the permittee shall maintain a copy of each notification required by this permit condition in accordance with Provision I.S.1 of this permit.

II.B.10.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11 **Conditions on Limestone Bypass System (LBS)**

II.B.11.a **Condition:**

Visible emissions shall be no greater than 10 percent opacity. [Origin: DAQE-AN0103030015-07] Authority: 40 CFR 60.672(b) (Subpart OOO).

II.B.11.a.1 **Monitoring:**

A visual observation of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visible emissions observer (VEO). If any visible emissions are observed, an opacity determination of that emission unit shall be performed by a certified VEO in accordance with 40 CFR 60, Appendix A, Method 9 within 24 hours of the initial observation. For each affected emission unit, if no visible emissions are observed for eight consecutive weeks the observation frequency shall be reduced to a monthly basis. If visible emissions are observed during any monthly observation the frequency shall revert back to a weekly basis.

II.B.11.a.2 **Recordkeeping:**

Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9 for each determination shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.11.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11.b **Condition:**

Throughput shall be no greater than 60,000 tons per 12-month rolling period. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.11.b.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.11.b.2 **Recordkeeping:**

Daily records of limestone bypass throughput shall be kept for all periods of operation. By the 25th day of each month, a new 12-month total shall be calculated using data from the previous 12 months. Records shall be kept in a supervisor log and in accordance with Provision I.S.1 of this permit

II.B.11.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11.c **Condition:**

Permittee shall operate water sprays or dust suppression sprays to control fugitive emissions. The sprays shall operate whenever dry conditions warrant or as determined necessary by the Executive Secretary. Sprays shall not be required during periods of freezing temperatures. [Origin: DAQE-AN0103030015-07] Authority: R307-401-8(1)(a) [BACT].

II.B.11.c.1 **Monitoring:**

Visual inspections of the water spray system(s) shall be made weekly to ensure proper operating condition.

II.B.11.c.2 **Recordkeeping:**

An operator's log shall be maintained of all monitoring provisions listed above. Records of water spray system inspections shall be kept for all periods of operation and the ambient temperature shall be recorded any time water should be applied but can not be due to freezing conditions.

II.B.11.c.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.C **Emissions Trading**
(R307-415-6a(10))

Not applicable to this source.

II.D **Alternative Operating Scenarios**.
(R307-415-6a(9))

Not applicable to this source.

SECTION III: PERMIT SHIELD

The following requirements have been determined to be not applicable to this source in accordance with Provision I.M, Permit Shield:

III.A. 40 CFR, Part 60, Subpart F ((NSPS / Standards of Performance for Portland Cement Plants))

This regulation is not applicable to the Permitted Source for the following reason(s): all Subpart F affected facilities are covered by 40 CFR 63 Subpart LLL. [Last updated August 30, 2007]

III.B. 40 CFR, Part 60, Subpart OOO ((NSPS / Standards of Performance for Nonmetallic Mineral Processing Plants))

This regulation is not applicable to the 211.BF1: Stationary Crusher for the following reason(s): it was constructed in 1981, prior to the Subpart OOO applicability date of August 31, 1983 [Last updated August 30, 2007]

III.C. 40 CFR, Part 60, Subpart OOO ((NSPS / Standards of Performance for Nonmetallic Mineral Processing Plants))

This regulation is not applicable to the 211.BF2: Raw Material Transfer for the following reason(s): it was constructed in 1981, prior to the Subpart OOO applicability date of August 31, 1983. [Last updated August 30, 2007]

III.D. 40 CFR 63.1349(b)(3), 63.1350(f), Subpart LLL ((NESHAP for the Portland Cement Manufacturing Industry))

This regulation is not applicable to the 41B.BF2: Coal Grinding System for the following reason(s): EPA granted a waiver in a letter dated November 6, 2002 from Martin Hestmark, EPA, to Robert Vantuyl, Ash Grove. The waiver is contingent on Ash Grove's compliance with Conditions II.B.4.i, II.B.4.j, II.B.4.n, and II.B.9.b of this permit. [Last updated August 30, 2007]

III.E. 40 CFR 63.1350(c), 63.1350(d) ((NESHAP for the Portland Cement Manufacturing Industry))

This regulation is not applicable to the 41B.BF2: Coal Grinding System for the following reason(s): it is not an affected source as defined in 40 CFR 63.1340. The coal mill is regulated by 40 CFR 60 Subpart Y. [Last updated August 30, 2007]

SECTION IV: ACID RAIN PROVISIONS

IV.A **This source is not subject to Title IV. This section is not applicable.**

REVIEWER COMMENTS

This operating permit incorporates all applicable requirements contained in the following documents:

Incorporates	DAQE-AN0103030015-07 dated July 23, 2007

1. Comment on an item originating in this permit regarding Permitted Source
   CAM plans: In accordance with 40 CFR 64, CAM plans were included in the operating permit at renewal for the following emission units: stationary crusher (211.BF1), kiln & pre-calciner and raw mill (317.BF1), and clinker cooler (419.BF1) [Last updated September 19, 2007]

2. Comment on an item originating in this permit regarding Permitted Source
   Sample optical density calculations for informational purposes:
   Optical density relates to opacity through the following equation.

$$OD = \log\left(\frac{1}{T}\right) = \log\left(\frac{1}{(1 - Opacity)}\right)$$

   Where: OD = Optical density
   T = Transmittance or (1 - Opacity), with opacity in decimal form

   Sample calculations for optical density:

   Given a measured opacity of 9.1%, optical density becomes,

$$OD = \log\left(\frac{1}{1 - 0.091}\right) = 0.041$$

   Given a measured opacity of 10%, optical density becomes,

$$OD = \log\left(\frac{1}{1 - 0.10}\right) = 0.046$$

   Additional information can be found in the EPA Handbook, "Continuous Emission Monitoring Systems for Non-criteria Pollutants" EPA/625/R-97/001 August 1997, pgs 43-47. [Last updated September 10, 2007]

3. Comment on an item originating in DAQE-AN0303012-06 regarding 311.BC1: Belt Conveyor Transfer Baghouse
   Removal of notice requirement: The permittee submitted notice to DAQ that the referenced emission unit has been installed in a letter dated January 27, 2007. The installation notice requirement for this unit has now been fulfilled, and the requirement has been removed from the permit. [Last updated September 12, 2007]

4. Comment on an item originating in this permit regarding 317.BF1: Kiln & Pre-Calciner and Raw Mill
   Additional data collection for optical density (OD) evaluation: The following applies to the collection of additional data during the 3-year kiln stack tests to be used for evaluating or updating the excursion OD value:
   1. Before obtaining data from COMS, the accuracy and reliability of the COMS shall be ensured. At a minimum, the operator shall inspect and verify proper operation of the monitor, clean the optical windows, remove any accumulated material from the

monitor flanges, adjust the monitor calibration to eliminate any drift or offsets, and reset zero compensation, if appropriate. The operator shall also conduct a clear path calibration of the opacity monitor within 1 month prior to the test and a performance audit using external calibrated filters.

2. Run at least three paired-runs or six consecutive runs for at least 1 hour each according to EPA Method 17, Method 5 or ASTM D6831-02. To be acceptable, each paired run result shall be within ±2.5 mg/acm of their average. To be acceptable, each consecutive run shall be within ±3.0 mg/acm of the average. Runs shall be rejected that do not meet the QA specification. All test run results that meet the QA requirement shall be used to establish the ODstd.
3. During each run, the feed rate shall be recorded. Tests shall be conducted at steady state conditions (≤ ±10% raw material input variation).
4. Calculate the emission rate in lb/hr and mg/acm. The emission rate shall be less than the permit limit for all runs.
5. Convert the emission limit in lb/hr to the equivalent PM concentration at actual stack conditions using the measured effluent flow rate, stack temperature, stack pressure, and effluent moisture concentrations.
6. Average the 6-minute average optical density readings that correspond to the duration of each acceptable PM run. In the event of COMS malfunction during the test run, the test shall be terminated. The variation in the optical density during the test run shall be ≤ 0.009 OD (2% opacity), otherwise additional test runs shall be conducted.
7. Calculate the optical density equivalent to the standard for each valid test run. Average all of the results to determine the new value of ODstd. Compare the ODstd to 0.097 (20% opacity) and use 0.67ODstd or 0.097, whichever is most restrictive. [3/29/2006] [Last updated August 30, 2007]

5. Comment on an item originating in DAQE-AN0103030015-07 regarding 317.BF1: Kiln & Pre-Calciner and Raw Mill

   Stack test for PM_{10}: This unit is subject to CAM in the renewal permit. As per 40 CFR 64.5(d), CAM monitoring satisfies the requirement in 40 CFR 70.6(a)(3)(i)(B) for periodic monitoring, but the PM_{10} stack test frequency specified in the AO remains an applicable requirement in Title V. [6/29/2006] [Last updated August 30, 2007]

6. Comment on an item originating in this permit regarding 419.BF1: Clinker Cooler

   Additional data collection for optical density (OD) evaluation: The following applies to the collection of additional data during the 3-year clinker cooler stack tests to be used for evaluating or updating the excursion optical density (OD) value:

   1. Before obtaining data from COMS, the accuracy and reliability of the COMS shall be ensured. At a minimum, the operator shall inspect and verify proper operation of the monitor, clean the optical windows, remove any accumulated material from the monitor flanges, adjust the monitor calibration to eliminate any drift or offsets, and reset zero compensation, if appropriate. The operator shall also conduct a clear path calibration of the opacity monitor within 1 month prior to the test and a performance audit using external calibrated filters.
   2. Run at least three paired-runs or six consecutive runs for at least 1 hour each using EPA Method 17, Method 5 or ASTM D6831-02. To be acceptable, each paired run result shall be within ±2.5 mg/acm of their average. To be acceptable, each consecutive run shall be within ±3.0 mg/acm of the average. Runs shall be rejected that do not meet the QA specification. All test run results that meet the QA requirement shall be used to establish the ODstd.
   3. During each run, the feed rate shall be recorded. Tests shall be conducted at steady state conditions (≤ ±10% raw material input variation).
   4. Calculate the emission rate in lb/hr and mg/acm. The emission rate shall be less than the permit limit for all runs.
   5. Convert the emission limit in lb/hr to the equivalent PM concentration at actual stack conditions using the measured effluent flow rate, stack temperature, stack pressure,

and effluent moisture concentrations.

6. Average the 6-minute average optical density readings that correspond to the duration of each acceptable PM run. In the event of COMS malfunction during the test run, the test shall be terminated. The variation in the optical density during the test run shall be ≤ 0.009 OD (2% opacity), otherwise additional test runs shall be conducted.
7. Calculate the optical density equivalent to the standard for each valid test run. Average all of the results to determine the new value of ODstd. Compare the ODstd to 0.046 (10% opacity) and use the most restrictive value. [3/01/2006] [Last updated August 30, 2007]

7. Comment on an item originating in DAQE-AN0103030015-07 regarding 419.BF1: Clinker Cooler Stack test for PM_{10}: This unit is subject to CAM in the renewal permit. As per 40 CFR 64.5(d), CAM monitoring satisfies the requirement in 40 CFR 70.6(a)(3)(i)(B) for periodic monitoring, but the PM_{10} stack test frequency specified in the AO remains an applicable requirement in Title V. [6/29/2006] [Last updated August 30, 2007]

8. Comment on an item originating in this permit regarding 41B.BF2: Coal Grinding System PM Test Frequency: A PM test frequency of five (5) years has been specified due to a low potential for noncompliance with the particulate standard on the thermal dryer. The low potential is demonstrated by previous stack test results. Results and percentage of limit from previous tests are as follows:
September 2005: 0.0051 gr/dscf PM (16.5%)
May 2002: 0.00079 gr/dscf PM (2.6%) [3/29/2006] [Last updated August 30, 2007]